

4-23-1979

Major in Biological Sciences - Option Two

The College at Brockport, College Senate

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Resolution #18
1978-1979

Major in Biological Sciences--Option Two

TO: PRESIDENT ALBERT W. BROWN

FROM: THE FACULTY SENATE

Meeting on April 23, 1979
(Date)

RE: XX I. Formal Resolution (Act of Determination)
II. Recommendation (Urging the fitness of)
III. Other (Notice, Request, Report, etc.)

SUBJECT: Major in Biological Sciences--Option Two

(See attached)

Signed _____ Date Sent 4/30/79
(For the Senate)

..... Charles Jenkins, President, Faculty Senate

TO: THE FACULTY SENATE

FROM: PRESIDENT ALBERT W. BROWN

RE: I. DECISION AND ACTION TAKEN ON FORMAL RESOLUTION

- (a) Accepted. Effective Date May 24, 1979
b. Deferred for discussion with the Faculty Senate on _____
c. Unacceptable for the reasons contained in the attached explanation

- II., III. a. Received and acknowledged
b. Comment:

DISTRIBUTION: Vice Presidents: Farris, Burke, Miller, Smith, Wolin
Others as identified: Fac Sen.

Distribution Date: _____

Signed: AWB
(President of the College)

Date Received by the Senate: JUN 4, 1979

PROPOSAL TO THE FACULTY SENATE
MAJOR IN BIOLOGICAL SCIENCES--OPTION TWO

Rationale

The Department of Biological Sciences and similar academic units have for many years oriented the major programs toward the preparation of students who plan to attend graduate schools or professional schools and toward those who wish to enter strongly technical career areas.

Increasingly, changes in the student population and the changing priorities of the College have brought to the Department students and potential majors who do not have these terminal goals for their undergraduate work.

We now find many students who desire and need a more flexible major program in the Biological Sciences. These students have an expressed interest in a wider selection of biology courses to support career opportunities in diverse areas such as museum curatorial work, civil service at the village, state, and federal levels, and in administration. In addition, students who have a strong interest in the Biological Sciences but wish to pursue this interest as an avocation would be well-served by another major option.

It is difficult and even impossible for us to meet the needs of this growing proportion of our students within the rigid constraints of our current major program. Adherence to an unnecessarily rigid program discourages students from continuing with their biological interests, or else, forces them into other majors as a second choice. Some students seek out other schools where their needs can be satisfied.

In short, the faculty of the Department of Biological Sciences is in unanimous agreement that a new option within the major program is needed to

Rationale (cont.)

give us this desired flexibility and to allow us to effectively serve and meet our obligations to this segment of the student population. It is with-
in this spirit that the Department proposes the Option Two major described below.

Summary Rationale

The Major in Biological Sciences--Option Two, as proposed, provides

1. additional program flexibility within the major for students pursuing a broad spectrum of career areas through their work in the Department of Biological Sciences.
2. an opportunity for additional in-depth coursework in the Biological Sciences without compromising the Liberal Arts approach to higher education.
3. an expanded opportunity for students to pursue non-major Liberal Arts course concentrations supportive of their career interests and of their individual intellectual development.

Major in Biological Sciences--Option Two

Requirements:

1. BIO 201 (Biology I--Botany) 4 cr.
BIO 202 (Biology II--Zoology) 4 cr.

BIO 204-205 (Focus on Biology I and II) 0.5 cr. each
or
BIO 304-305* (Focus on Biology III and IV) 0.5 cr. each

total credit hours = 9
2. 300-level BIO courses, selected by advisement

total credit hours = 12
3. 400-level BIO courses, selected by advisement

total credit hours = 9
4. CHM 261 (General Chemistry I) 4 cr.

Recommended:

1. CHM 262 (General Chemistry II) 4 cr.
2. PSH 202 (Statistical Foundations) 3 cr.

300-Level Courses Available to Option Two Majors:

BIO 303	Ecology	4 Cr.
BIO 312	Human Reprod. & Develop.	3 Cr.
BIO 314	Man and His Environment	3 Cr.
BIO 315	Disease and Man	3 Cr.
BIO 316	Forest Resources	3 Cr.
BIO 321	Anatomy and Physiology I	4 Cr.
BIO 322	Anatomy and Physiology II	4 Cr.
BIO 323	Microbiology	4 Cr.
BIO 324	Grounds Management	3 Cr.
BIO 333	Student Originated Studies	3 Cr.
BIO 395	Topics in Biology	3 Cr.
BIO 399	Independent Study	1-4 Cr.

400-Level Courses Available to Option Two Majors:

BIO 411	Evolution	3 Cr.
BIO 413	Heredity and Eugenics	3 Cr.
BIO 418	Aquatic Biology	4 Cr.
BIO 422	Population Biology	3 Cr.
BIO 423	Biology of Pollution	3 Cr.
BIO 424	Conservation Practicum	4 Cr.
BIO 425	Local Flora	4 Cr.
BIO 426	Economic Botany	3 Cr.
BIO 427	Ethology	3 Cr.
BIO 431	Biometrics	3 Cr.
BIO 433	Microtechnique	3 Cr.
BIO 437	Horticultural Science	4 Cr.
BIO 441	Plant Morphology	4 Cr.
BIO 442	Comparative Vertebrate Anat.	4 Cr.
BIO 443	Invertebrate Zoology	4 Cr.
BIO 444	Cytology	4 Cr.
BIO 445	Histology	4 Cr.
BIO 451	Plant Morphogenesis	4 Cr.
BIO 452	Embryology	4 Cr.
BIO 464	Vertebrate Physiology	4 Cr.
BIO 465	Environmental Zoophysiology	4 Cr.
BIO 466	General Endocrinology	3 Cr.
BIO 471	Microbial Ecology	3 Cr.
BIO 472	Algal Ecology	4 Cr.
BIO 473	Plant Ecology	4 Cr.
BIO 474	Animal Ecology	4 Cr.
BIO 475	Woodland Management	4 Cr.
BIO 476	Environmental Res. Mgt.	3 Cr.
BIO 477	Field Biology	4 Cr.

400-Level Courses

BIO 478	Edible Plants	3 Cr.
BIO 481	Mycology	4 Cr.
BIO 482	Plant Taxonomy	4 Cr.
BIO 483	Aquatic Invertebrates	4 Cr.
BIO 484	Parasitology	4 Cr.
BIO 485	Entomology	4 Cr.
BIO 486	Ichthyology	4 Cr.
BIO 487	Ornithology	4 Cr.
BIO 488	Mammalogy	4 Cr.
BIO 489	Vertebrate Systematics	4 Cr.
BIO 491	Biol. Sci. Overseas Program	1-15 Cr.
BIO 492	Undergrad. Res. Participation	3 Cr.
BIO 495	Topics in Biology I	3 Cr.
BIO 496	Topics in Biology II	3 Cr.
BIO 498	Seminar in Biology	1 Cr.
BIO 499	Independent Study	1-4 Cr.

NOTE: BIO courses not listed are excluded because of their chemistry prerequisites.

Write-up For The Biology Major's Handbook

MAJOR IN BIOLOGICAL SCIENCES--OPTION ONE

The Option One Major is the traditional biology major oriented toward the preparation of undergraduate students for admission to graduate schools and professional schools. This major option is also strongly recommended for students who desire to find employment in the technical fields of the Biological Sciences--it opens to the competent student the full range of biological careers possible at this educational level. For successful career development in these technical fields the training in general chemistry and organic chemistry required by this major option should be viewed as mandatory. In addition, thorough preparation in chemistry is a pre-requisite for certain biology courses required in this option.

It is important that students who have the slightest interest in the career areas mentioned above select this major option. The chemistry courses required are the only ones which will be accepted toward the admission requirements of graduate and professional schools. Students who begin in the Option Two major would experience delays if they decide to switch to the Option One major at a later date.

MAJOR IN BIOLOGICAL SCIENCES--OPTION TWO

The Option Two Major is a non-traditional biology major of a flexible nature designed to meet the needs of students interested in biology-related careers of a non-technical nature. The use of this major option and careful consultation with Departmental advisors allows the student to pursue a biolog-

ical education in depth while retaining the Liberal Arts quality of the educational experience. The relaxed chemistry requirement gives the student an opportunity to develop other non-major concentrations which might be supportive of the career interest or of the individual's personal intellectual growth.

The Option Two Major is most appropriate for students who wish to prepare for areas such as museum curatorial work, non-technical civil service at the village, state or federal levels, and administration.

This option is not appropriate for (a) students planning to attend graduate school in biological sciences or (b) students in the pre-medical, pre-dental, or pre-veterinarian programs.